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Grape colaspis found in central Iowa

Benjamin Kaeb
Iowa State University

Jon J. Tollefson
Iowa State University, tolly@iastate.edu

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Grape colaspis found in central Iowa

Abstract

The grape colaspis is a root-feeding pest of crops, occasionally injuring corn. Historically in Iowa, it was a pest in crop rotations where corn followed red clover. As Iowa agriculture placed a greater emphasis on row crops (primarily corn and soybean), the incidence of grape colaspis infestations declined. However, in recent years (since 1999) the grape colaspis has reemerged in modern crop rotations causing damage to corn following soybeans. Significant populations in seed corn and commercial corn following seed corn have been observed in central Iowa.

Keywords

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Disciplines

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INTEGRATED CROP MANAGEMENT

Grape colaspis found in central Iowa

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Grape colaspis larva (next to a dime for size comparison).

[Enlarge](#) [1]

The grape colaspis has a single generation per year in Iowa. The adults emerge from the soil in late June through July and feed on the foliage of a wide variety of plants, including soybeans, but rarely on corn. Adult beetles can be found in sweep net samples from soybeans throughout July and into August. They mate soon after emergence, and the females begin ovipositing 5 to 15 days later. The eggs hatch in 1 to 2 weeks and the larvae feed on the root hairs of the soybeans where they cause little damage. The larvae move deep into the soil to overwinter. In the spring, they move up into the root zone as the soil warms and begin feeding on root hairs of the newly emerged corn. The root feeding can result in economic damage, especially when the small root systems of inbred corn in seed cornfields are attacked. The larvae feed until mid June to early July when they pupate and emerge 6 to 9 days later as adults.

The damage from the grape colaspis often first appears as stunted plants. During dry periods, corn the plants may wilt because of the loss of roots which reduces water uptake. The leaves of the plant may show the purpling of a phosphorus deficiency because root-loss prevents the uptake of nutrients. Plants may also turn yellow, and in severe cases, the plants may be killed. Injury in fields may be spotty, most often associated with lighter soils on slopes.

If grape colaspis injury is suspected, the larvae can be found feeding on corn roots. Larvae are small and require meticulous inspection of the roots. A trenching shovel and a putty knife work well to dig up a plant and carefully peel the soil from the roots. The larvae will be found feeding on root hairs away from the base of the plant. The larvae are small cream-colored grubs (1/8 to 3/16 of an inch), rather plump compared to other small grubs, and covered with

bunches of hair. They have light tan heads, which allows them to be differentiated from manure grubs or small white grubs, which have longer bodies and darker colored heads.

If grape colaspis injury occurs and the larvae are found, there is no rescue treatment. The infestation should be noted in the field history so that preventative measures can be taken in future years when corn is planted into the field again.

This year grape colaspis larvae were found feeding in seed corn and commercial corn fields in central Iowa during the last two weeks of May and the first week of June. The larvae that were found in the first week of June were in the seventh through tenth instars meaning that pupation may begin soon, so any suspected problems should be investigated immediately.

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[1] http://www.ent.iastate.edu/imagegal/coleoptera/grapecolaspis/colaspis_larva.html

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